# NEW SOURCE CONSTRUCTION PERMIT
# and MINOR SOURCE OPERATING PERMIT
# OFFICE OF AIR MANAGEMENT

## Custom Building Products
## 3800 West State Road 28
## Frankfort, Indiana 46041

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-5.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

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|---|---|
| Operation Permit No.: MSOP 023-12191-00036 | |
| Issued by:<br>Paul Dubenetzky, Branch Chief<br>Office of Air Management | Issuance Date: |

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary dry grout and cement mixing operation and board plant manufacturing operation.

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| Authorized Individual: | Glen Cooke, Jr. |
| Source Address: | 3800 West State Road 28, Frankfort, Indiana 46041 |
| Mailing Address: | 3800 West State Road 28, Frankfort, Indiana 46041 |
| Phone Number: | 765-656-0234 |
| SIC Code: | 2899 and 2891 |
| County Location: | Clinton |
| County Status: | Attainment for all criteria pollutants |
| Source Status: | Minor Source Operating Permit<br>Minor Source, under PSD rules |

### A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) One dry mix operation, identified as EU1, with a maximum capacity of mixing 120,000 pounds per hour, using ten (10) bin vents and one (1) dust collector for particulate matter (PM) control, and exhausting to stacks BV-1 through BV-10, and MT-1, respectively.

(b) One board plant operation, identified as EU2, with a maximum capacity of 40,000 pounds per hour, using two (2) baghouses for particulate matter (PM) control, and exhausting to stacks BP-1 and BP-2.

(c) Three (3) natural gas-fired space heaters, identified as H-1, H-2 and H-3, each with a heat input capacity of 1.6 million Btu per hour (MMBtu), and exhausting to stacks H-1, H-2 and H-3;

(d) One (1) natural gas-fired boiler, identified as B-1, with a heat input capacity of 0.9 million Btu per hour (MMBtu), and exhausting to stack B-1.

**SECTION B GENERAL CONSTRUCTION CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled “Minor Source Operating Permit”, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAM, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, upon request and shall be subject to review and approval by IDEM, OAM. IDEM, OAM, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.2 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.3 Inspection and Entry [326 IAC 2-7-6(2)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.4 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAM, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.5 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.6 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.7 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.8 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

**Testing Requirements**

C.9 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

**Compliance Monitoring Requirements**

C.10 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

**Record Keeping and Reporting Requirements**

C.12 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.13 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-annual Report. Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

(d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Management stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, on or before the date it is due.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

(a) One dry mix operation, identified as EU1, with a maximum capacity of mixing 120,000 pounds of cement per hour, using ten (10) bin vents and one (1) dust collector for particulate matter (PM) control, and exhausting to stacks BV-1 through BV-10, and MT-1, respectively.

(b) One board plant operation, identified as EU2, with a maximum capacity of 40,000 pounds per hour, using two (2) baghouses for particulate matter (PM) control, and exhausting to stacks BP-1 and BP-2.

### Emission Limitations and Standards

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

(a) The PM from the dry mix operation and board plant operation shall not exceed the pound per hour emission rate established as E in the following formulas:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

and

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

| Emission Unit | Process Weight Rate (tons/hr) | Allowable PM Emissions (lbs/hr) | Emission Factor (lb/ton) |
|---|---|---|---|
| **Mixing Operations** | | | |
| Unloading Cement | 29.40 | 39.50 | 0.270 |
| Unloading Aggregate | 30.60 | 40.13 | 0.029 |
| Weigh Hopper Loading | 60.00 | 46.29 | 0.020 |
| Mixer Loading | 60.00 | 46.29 | 0.040 |
| Final Product Filling | 60.00 | 46.29 | 0.020 |
| **Dry Board Operations** | | | |
| Unloading Cement | 8.60 | 17.33 | 0.270 |
| Unloading Aggregate | 11.40 | 20.94 | 0.029 |
| Weigh Hopper Loading | 20.00 | 30.51 | 0.020 |
| Mixer Loading | 20.00 | 30.51 | 0.040 |

These facilities comply with the limits without the benefit or necessity of any add-on emission control equipment.

(b) The particulate matter emissions shall not exceed one hundred (100) tons per year. Therefore, 326 IAC 2-7 will not apply.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

(a) Three (3) natural gas-fired space heaters, identified as H-1, H-2, and H-3, each with a heat input capacity of 1.6 million Btu per hour (MMBtu), and exhausting to stacks H-1, H-2 and H-3;

(b) One (1) natural gas-fired boiler, identified as B-1, with a heat input capacity of 0.9 million Btu per hour (MMBtu), and exhausting to stack B-1.

### Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating**,** the PM emissions from one (1) natural gas-fired boiler (ID No. B-1), shall not exceed 0.6 pounds per million Btu heat input.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR MANAGEMENT**
**COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT**
**ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

| | |
|---|---|
| **Company Name:** | **Custom Building Products** |
| **Address:** | **3800 West State Road 28** |
| **City:** | **Frankfort, Indiana 46041** |
| **Phone #:** | **765-656-0234** |
| **MSOP #:** | **023-12191-00036** |

I hereby certify that Custom Building Products is
- **9** still in operation.
- **9** no longer in operation.

I hereby certify that Custom Building Products is
- **9** in compliance with the requirements of MSOP 023-12191-00036.
- **9** not in compliance with the requirements of MSOP 023-12191-00036.

| |
|---|
| **Authorized Individual (typed):** |
| **Title:** |
| **Signature:** |
| **Date:** |

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

| |
|---|
| **Noncompliance:** |
| |
| |
| |

# Indiana Department of Environmental Management
# Office of Air Management

## Technical Support Document (TSD) for a New Source Construction and Minor Source Operating Permit

### Source Background and Description

| | |
|---|---|
| **Source Name:** | **Custom Building Products** |
| **Source Location:** | **3800 West State Road 28, Frankfort, Indiana 46041** |
| **County:** | **Clinton** |
| **SIC Code:** | **2899 and 2891** |
| **Operation Permit No.:** | **MSOP 023-12191-00036** |
| **Permit Reviewer:** | **Linda Quigley/EVP** |

The Office of Air Management (OAM) has reviewed an application from Custom Building Products relating to the construction and operation of dry grout and cement mixing operations, and board plant operations.

### New Emission Units and Pollution Control Equipment

The application includes information relating to the prior approval for the construction and operation of the following equipment:

(a) One dry mix operation, identified as EU1, with a maximum capacity of mixing 120,000 pounds per hour, using ten (10) bin vents and one (1) dust collector for particulate matter (PM) control, and exhausting to stacks BV-1 through BV-10, and MT-1, respectively.

(b) One board plant operation, identified as EU2, with a maximum capacity of 40,000 pounds per hour, using two (2) baghouses for particulate matter (PM) control, and exhausting to stacks BP-1 and BP-2.

(c) Three (3) natural gas-fired space heaters, identified as H-1, H-2 and H-3, each with a heat input capacity of 1.6 million Btu per hour (MMBtu), and exhausting to stacks H-1, H-2 and H-3;

(d) One (1) natural gas-fired boiler, identified as B-1, with a heat input capacity of 0.9 million Btu per hour (MMBtu), and exhausting to stack B-1.

### Existing Approvals

The source does not have any existing approvals.

**Stack Summary**

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature ($^0$F) |
|---|---|---|---|---|---|
| BV-1 through-BV-10 | mixing tower bin vents | 109 | 1.5 | unassisted aspiration | ambient |
| MT-1 | mixing tower dust collector | 16 | 1.8 | 18,000 | ambient |
| BP-1 | board plant baghouse | 40 | 0.67 x 1.5 | 800 | ambient |
| BP-2 | board plant baghouse | 40 | 0.67 | 2500 | ambient |
| H-1 | space heater | 40 | 0.67 | unknown | 120 |
| H-2 | space heater | 40 | 0.67 | unknown | 120 |
| H-3 | space heater | 20 | 0.67 | unknown | 120 |
| B-1 | small boiler | 40 | 1.17 | unknown | 120 |

**Enforcement Issue**

There are no enforcement actions pending.

**Recommendation**

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 19, 2000, with additional information received on June 18, 2000 and July 21, 2000.

**Emission Calculations**

See Appendix A of this document for detailed emissions calculations, pages 1 through 5.

**Potential To Emit**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 77.05 |
| PM-10 | 76.74 |
| $SO_2$ | 0.01 |
| VOC | 0.13 |
| CO | 2.05 |
| $NO_x$ | 2.44 |

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of particulate matter (PM) and PM10 are equal to or greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-5.1-3, Section (a)(1), and 326 IAC 2-6.1-2, a construction and operating permit is required.

**Actual Emissions**

No previous emission data has been received from the source.

**County Attainment Status**

The source is located in Clinton County.

| Pollutant | Status |
|---|---|
| PM-10 | attainment |
| $SO_2$ | attainment |
| $NO_2$ | attainment |
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Clinton County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

**Source Status**

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

| Pollutant | Emissions (ton/yr) |
|---|---|
| PM | 51.04 |
| PM10 | 50.73 |
| $SO_2$ | 0.01 |
| VOC | 0.13 |
| CO | 2.05 |
| $NO_x$ | 2.44 |
| Single HAP | 0.00 |
| Combination HAPs | 0.00 |

(a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

**Part 70 Permit Determination**

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

**Federal Rule Applicability**

(a) The small industrial boiler (B-1) is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), because the boiler is rated at less than ten (10) million Btu per hour (MMBtu/hr).

(b) This source is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.60, Subpart F), because it does not manufacture portland cement.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

**State Rule Applicability - Entire Source**

326 IAC 2-6 (Emission Reporting)

This source is located in Clinton County and the potential to emit VOC, CO, SO2, and $NO_X$ is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**State Rule Applicability - Individual Facilities**

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the following processes shall be limited by the following:

(a) Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

| Emission Unit | Process Weight Rate (tons/hr) | Uncontrolled PM Emissions (lb/hr) | Control Efficiency % | Controlled PM Emissions (lb/hr) | Allowable PM Emissions (326 IAC 6-3-2) (lb/hr) | Emission Factor (lb/ton) |
|---|---|---|---|---|---|---|
| **Mixing Operations** | | | | | | |
| Unloading Cement | 29.40 | 7.94 | 0.0 | 7.94 | 39.50 | 0.270 |
| Unloading Aggregate | 30.60 | 0.89 | 0.0 | 0.89 | 40.13 | 0.029 |
| Weigh Hopper Loading | 60.00 | 1.20 | 99.9 | 0.01 | 46.29 | 0.020 |
| Mixer Loading | 60.00 | 2.40 | 99.9 | 0.03 | 46.29 | 0.040 |
| Final Product Filling | 60.00 | 1.20 | 99.9 | 0.01 | 46.29 | 0.020 |
| **Dry Board Operations** | | | | | | |
| Unloading Cement | 8.60 | 2.32 | 0.0 | 2.32 | 17.33 | 0.270 |
| Unloading Aggregate | 11.40 | 0.33 | 0.0 | 0.33 | 20.94 | 0.029 |
| Weigh Hopper Loading | 20.00 | 0.40 | 99.9 | 0.00 | 30.51 | 0.020 |
| Mixer Loading | 20.00 | 0.80 | 99.9 | 0.01 | 30.51 | 0.040 |

These facilities comply with the limits without the benefit or necessity of any add-on emission control equipment. The source however, has voluntarily installed two (2) baghouses, ten (10) bin vents and one (1) dust collector.

(b) The particulate matter emissions shall not exceed one hundred (100) tons per year. Therefore, 326 IAC 2-7 will not apply

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)

The one (1) natural gas fired boiler (ID No. B-1), with a heat input capacity rating of 0.9 MMBtu per hour, is subject to the particulate matter limitations of 326 IAC 6-2-4. Pursuant to this rule, particulate emissions from indirect heating facilities constructed after September 21, 1983, shall be limited by the following equation:

$Pt = 1.09/Q^{0.26}$

where: Pt = maximum allowable particulate matter (PM) emitted per MMBtu heat input
Q = total source max. operation capacity rating = 0.9 MMBtu/hr

For Q less than ten (10) MMBtu/hr, Pt shall not exceed 0.6.

Therefore, the maximum allowable particulate matter (PM) is 0.6 lb/MMBtu which is equivalent to a PM emission rate of 0.67 lb/hr for boiler ID No. B-1.

326 IAC 2-4.1 (New Source Toxics Control)

This rule applies to new or reconstructed facilities with potential emissions of any single HAP equal to or greater than ten (10) tons per year and potential emissions of combination of HAPs greater than or equal to twenty-five (25) tons per year. Since this facility does not emit any HAPs, the requirements of 326 IAC 2-4.1 do not apply.

**Conclusion**

The construction and operation of the mixing operation and board plant operation shall be subject to the conditions of the attached proposed **New Source Construction and Minor Source Operating Permit 023-12191-00036.**

# Indiana Department of Environmental Management
# Office of Air Management

## Addendum to the
## Technical Support Document for New Construction and Operation

| | |
|---|---|
| **Source Name:** | **Custom Building Products** |
| **Source Location:** | **3800 West State Road 28, Frankfort, Indiana 46041** |
| **County:** | **Clinton** |
| **Construction Permit No.:** | **MSOP-023-12191-00036** |
| **SIC Code:** | **2899 and 2891** |
| **Permit Reviewer:** | **Linda Quigley/EVP** |

On August 19, 2000, the Office of Air Management (OAM) had a notice published in the The Times, Frankfort, Indiana, stating that Custom Building Products had applied for a construction permit to construct and operate a dry grout and cement mixing operation and board plant operation with two (2) baghouses, one (1) dust collector, and ten (10) bin vents as air pollution control devices. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On August 25, 2000, the Clinton County Board of Commissioners submitted a comment on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

**Comment #1**

In regards to the Notice for Public Comment for Custom Building Products, the Clinton County Board of Commissioners would like to receive notice of future proceedings conducted in relation to this action.

**Response #1**

OAM will send to you at the following address

Clinton County Board of Commissioners
125 Courthouse Square
Frankfort, IN 46041-1942

all notices of any future proceedings pertaining to MSOP 023-12191-00036 for Custom Building Products.

No other comments were received.

# Appendix A: Emission Calculations

**Company Name:** Custom Building Products
**Address City IN Zip:** 3800 West State Road 28, Frankfort, IN 46041
**MSOP:** 023-12191-00036
**Plt ID:** 023-00036
**Reviewer:** Linda Quigley/EVP
**Date:** July 26, 2000

## Uncontrolled Potential Emissions (tons/year)

| | Emissions Generating Activity | | | |
|---|---|---|---|---|
| Pollutant | Natural Gas Combustion | Dry Grout and Cement Mixing | Board Plant Operations | **TOTAL** |
| PM | 0.50 | 59.68 | 16.87 | 77.05 |
| PM10 | 0.19 | 59.68 | 16.87 | 76.74 |
| SO2 | 0.01 | 0.00 | 0.00 | 0.01 |
| NOx | 2.44 | 0.00 | 0.00 | 2.44 |
| VOC | 0.13 | 0.00 | 0.00 | 0.13 |
| CO | 2.05 | 0.00 | 0.00 | 2.05 |
| total HAPs | 0.00 | 0.00 | 0.00 | 0.00 |
| worst case single HAP | 0.00 | 0.00 | 0.00 | 0.00 |

Total emissions based on rated capacity at 8,760 hours/year.

## Controlled Potential Emissions (tons/year)

| | Emissions Generating Activity | | | |
|---|---|---|---|---|
| Pollutant | Natural Gas Combustion | Dry Grout and Cement Mixing | Board Plant Operations | **TOTAL** |
| PM | 0.50 | 38.87 | 11.67 | 51.04 |
| PM10 | 0.19 | 38.87 | 11.67 | 50.73 |
| SO2 | 0.01 | 0.00 | 0.00 | 0.01 |
| NOx | 2.44 | 0.00 | 0.00 | 2.44 |
| VOC | 0.13 | 0.00 | 0.00 | 0.13 |
| CO | 2.05 | 0.00 | 0.00 | 2.05 |
| total HAPs | 0.00 | 0.00 | 0.00 | 0.00 |
| worst case single HAP | 0.00 | 0.00 | 0.00 | 0.00 |

Total emissions based on rated capacity at 8,760 hours/year, after control.

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**Make-up Air Units and Small Industrial Boiler**

**Company Nai** **Custom Building Products**
**Address City** **3800 West State Road 28, Frankfort, IN 46041**
**MSOP:** **023-12191-00036**
**Plt ID:** **023-00036**
**Reviewer:** Linda Quigley/EVP
**Date:** June 8, 2000

| | Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|---|
| H-1 | 1.57 | 13.74 |
| H-2 | 1.56 | 13.62 |
| H-3 | 1.56 | 13.62 |
| B-1 | 0.90 | 7.88 |
| Total | 5.58 | 48.86 |

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM* | PM10* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 100.0 **see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.05 | 0.19 | 0.01 | 2.44 | 0.13 | 2.05 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

above
emission

See page 3 for HAPs emissions calculations.



**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**Make-up Air Units and Small Industrial Boiler**
**HAPs Emissions**

**Company Nai** **Custom Building Products**
**Address City** **3800 West State Road 28, Frankfort, IN 46041**
**CP:** **023-12191-00036**
**Plt ID:** **023-00036**
**Reviewer:** Linda Quigley/EVP
**Date:** June 8, 2000

HAPs - Organics

| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene |
|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | 2.1E-03 | 1.2E-03 | 7.5E-02 | 1.8E+00 | 3.4E-03 |
| Potential Emission in tons/yr | 1.442E-05 | 8.241E-06 | 5.151E-04 | 1.236E-02 | 2.335E-05 |

HAPs - Metals

| | Lead | Cadmium | Chromium | Manganese | Nickel |
|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 |
| Potential Emission in tons/yr | 3.434E-06 | 7.555E-06 | 9.615E-06 | 2.610E-06 | 1.442E-05 |

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emission Calculations**
**Dry Grout and Cement Mixing**

**Company Name:** Custom Building Products
**Address City IN Z** 3800 West State Road 28, Frankfort, IN 46041
**MSOP:** 023-12191-00036
**Plt ID:** 023-00036
**Reviewer:** Linda Quigley/EVP
**Date:** July 26, 2000

* * PM emissions before controls * *

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Unloading Cement | 29.40 | ton/hr x | 0.2700 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 34.77 | tons/yr |
| Unloading Aggregate | 30.60 | ton/hr x | 0.0290 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 3.89 | tons/yr |
| Weigh hopper loadin | 60.00 | ton/hr x | 0.02 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 5.26 | tons/yr |
| Mixer loading | 60.00 | ton/hr x | 0.04 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 10.51 | tons/yr |
| Final product filling | 60.00 | ton/hr x | 0.02 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 5.26 | tons/yr |
| Total emissions before controls: | | | | | | | | 59.68 | tons/yr |

Emission Factors from AP-42 Table 11.12-2

* * PM emissions after controls * *

| | | | | | | |
|---|---|---|---|---|---|---|
| Unloading Cement | 34.77 | tons/yr x | 100% | emitted after controls = | 34.77 | tons/yr |
| Unloading Aggregate | 3.89 | tons/yr x | 100% | emitted after controls = | 3.89 | tons/yr |
| Weigh hopper loadin | 5.26 | tons/yr x | 1% | emitted after controls = | 0.05 | tons/yr |
| Mixer loading | 10.51 | tons/yr x | 1% | emitted after controls = | 0.11 | tons/yr |
| Final product filling | 5.26 | tons/yr x | 1% | emitted after controls = | 0.05 | tons/yr |
| Total emissions after controls: | | | | | 38.87 | tons/yr |

**Appendix A: Emission Calculations**
**Board Plant Operations**

**Company Name:** Custom Building Products
**Address City IN Z** 3800 West State Road 28, Frankfort, IN 46041
**MSOP:** 023-12191-00036
**Plt ID:** 023-00036
**Reviewer:** Linda Quigley/EVP
**Date:** July 26, 2000

* * PM emissions before controls * *

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Unloading Cement | 8.60 | ton/hr x | 0.2700 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 10.17 | tons/yr |
| Unloading Aggregate | 11.40 | ton/hr x | 0.0290 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 1.45 | tons/yr |
| Weigh hopper loadin | 20.00 | ton/hr x | 0.02 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 1.75 | tons/yr |
| Mixer loading | 20.00 | ton/hr x | 0.04 | lb/ton | / 2000 lb/ton x | 8760 | hr/yr = | 3.50 | tons/yr |
| Total emissions before controls: | | | | | | | | 16.87 | tons/yr |

Emission Factors from AP-42 Table 11.12-2

* * PM emissions after controls * *

| | | | | | | |
|---|---|---|---|---|---|---|
| Unloading Cement | 10.17 | tons/yr x | 100% | emitted after controls = | 10.17 | tons/yr |
| Unloading Aggregate | 1.45 | tons/yr x | 100% | emitted after controls = | 1.45 | tons/yr |
| Weigh hopper loadin | 1.75 | tons/yr x | 1% | emitted after controls = | 0.02 | tons/yr |
| Mixer loading | 3.50 | tons/yr x | 1% | emitted after controls = | 0.04 | tons/yr |
| Total emissions after controls: | | | | | 11.67 | tons/yr |